

FLASH TANK FOR ECONOMIZER REFRIGERATION SYSTEMS

ABSTRACT OF THE DISCLOSURE

A flash tank configuration for an economizer is provided that is inexpensive and simple to construct, reliable to operate, and efficient for use in an economizer compression refrigeration system. The configuration includes an upper baffle and a lower baffle configured and arranged within the flash tank so as to separate the liquid and gas phases of intermediate pressure refrigerant, and to convey each phase to other components in the refrigeration systems. The flash tank has a generally cylindrical shape, and is dimensioned so as to provide adequate internal volume for expansion of refrigerant to a desired pressure, separation of the resulting refrigerant gas and refrigerant liquid phases, and temporary storage of the refrigerant phases before conveying the liquid phase to the main refrigerant line between the condenser and the evaporator, and returning the gas phase to the compressor. Additionally, methods are provided for using the flash tank to separate refrigerant phases.